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15. A method for preparing cured Virginia tobacco having a TSNA content below 2 ppm, based on the dry weight of the cured tobacco, comprising the steps of:

- providing a barn having an air circulation device and a heat exchange unit;
- putting harvested green Virginia tobacco in the barn;
- producing heated air and exhaust gases through the act of burning a propane or diesel fuel in the heat exchange unit;
- preventing substantially all of the exhaust gases, produced through the act of burning a propane or diesel fuel in the heat exchange unit, from contacting the harvested tobacco and from causing a chemical reaction therewith;
- circulating the heated air, with the aid of the air circulation device, produced through the act of burning a propane or diesel fuel in the heat exchange unit, through the barn for at least about 120 hours in the absence of substantially all of the exhaust gases to produce cured tobacco while substantially preventing formation of TSNA in the cured tobacco that would otherwise be formed as a result of the chemical reaction;
- making a determination that the TSNA content of the cured tobacco is below 2 ppm; and
- correlating the determination with the preparation of the cured tobacco in a barn having a heat exchange unit.

16. A method for preparing cured Virginia tobacco having a TSNA content below 2 ppm, based on the dry weight of the cured tobacco, comprising the steps of:

- providing a barn having an air circulation device and a heat exchange unit;
- putting harvested green Virginia tobacco in the barn;
- producing heated air and exhaust gases through the act of burning a propane or diesel fuel in the heat exchange unit;
- preventing substantially all of the exhaust gases, produced through the act of burning a propane or diesel fuel in the heat exchange unit, from contacting the harvested tobacco and from causing a chemical reaction therewith;
- circulating the heated air, with the aid of the air circulation device, produced through the act of burning a propane or diesel fuel, in the heat exchange unit, through the barn for at least about 120 hours in the absence of substantially all of the exhaust

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gases to produce cured tobacco while substantially preventing formation of TSNA in the cured tobacco that would otherwise be formed as a result of the chemical reaction;
making a determination that the TSNA content of the cured tobacco is below 2 ppm; and
correlating the determination with the preparation of cured tobacco that is not contacted by the exhaust gases produced during curing.

17. A method for preparing cured Virginia tobacco having a TSNA content below 2 ppm, based on the dry weight of the cured tobacco, comprising the steps of:
providing a barn having an air circulation device and a heat exchange unit;
putting harvested green Virginia tobacco in the barn;
producing heated air and exhaust gases through the act of burning a propane or diesel fuel in the heat exchange unit;
preventing substantially all of the exhaust gases, produced through the act of burning a propane or diesel fuel in the heat exchange unit, from contacting the harvested tobacco and from causing a chemical reaction therewith;
circulating the heated air, with the aid of the air circulation device, produced through the act of burning a propane or diesel fuel, in the heat exchange unit, through the barn for at least about 120 hours in the absence of substantially all of the exhaust gases to produce cured tobacco while substantially preventing formation of TSNA in the cured tobacco that would otherwise be formed as a result of the chemical reaction;
making a determination that the TSNA content of the cured tobacco is below 2 ppm; and
correlating the determination with the preparation of cured tobacco that does not react with the exhaust gases during curing.

18. A method for preparing a tobacco product from cured Virginia tobacco having a TSNA content below 2 ppm, based on the dry weight of the cured tobacco, comprising the steps of:
providing a barn having an air circulation device and a heat exchange unit;
putting harvested green Virginia tobacco in the barn;

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producing heated air and exhaust gases through the act of burning a propane or diesel fuel in the heat exchange unit;

preventing substantially all of the exhaust gases, produced through the act of burning a propane or diesel fuel in the heat exchange unit, from contacting the harvested tobacco and from causing a chemical reaction therewith;

circulating the heated air, with the aid of the air circulation device, produced through the act of burning a propane or diesel fuel, in the heat exchange unit, through the barn for at least about 120 hours in the absence of substantially all of the exhaust gases to produce cured tobacco while substantially preventing formation of TSNA in the cured tobacco that would otherwise be formed as a result of the chemical reaction;

determining that the TSNA content of the cured tobacco is below 2 ppm;

correlating the determination with the preparation of cured tobacco that is not contacted by the exhaust gases produced during curing; and

incorporating the cured tobacco into a tobacco product; wherein the TSNA content of the tobacco in the tobacco product is below 2 ppm.

19. A method for preparing cured Virginia tobacco comprising the steps of:

(a) placing harvested green Virginia tobacco in a barn;

(b) circulating heated air through the tobacco in the barn for at least about 120 hours to produce cured tobacco; wherein the air is heated by burning a propane or diesel fuel in a heat exchanger and circulating the air through the heat exchanger and the barn with a fan, such that the tobacco is not exposed to the nitric oxide gases produced by burning a propane or diesel fuel; and wherein the step of circulating heated air comprises:

yellowing the tobacco for about 48 total hours at about 35°C,

increasing the temperature about 1°C per hour to about 49°C,

drying the tobacco for an additional about 10 hours at about 49°C,

increasing the temperature about 1°C per hour to about 57°C,

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drying the tobacco for an additional about 14 hours at about 57°C,
increasing the temperature about 1°C per hour to about 74°C, and
drying the tobacco until the midribs are dry;

- (c) turning the heat off;
- (d) opening the doors of the barn;
- (e) reordering the cured tobacco by contacting it with ambient air;
- (f) making a determination that the TSNA content of the cured tobacco is significantly reduced compared to tobacco cured with heated air containing nitric oxide gases produced from the burning of a propane or diesel fuel; and
- (g) correlating the determination with the preparation of cured tobacco that is not contacted by the exhaust gases produced during curing.

20. In a method for preparing a tobacco product from cured Virginia tobacco comprising the steps of placing harvested green Virginia tobacco in a barn and circulating heated air through the tobacco in the barn for at least about 120 hours to produce cured tobacco; wherein the air is heated by burning a propane or diesel fuel in a heat exchanger and circulating the air through the heat exchanger and the barn with a fan, such that the tobacco is not exposed to the nitric oxide gases produced by burning the a propane or diesel fuel;

wherein the improvement comprises the steps of:

making a determination that the TSNA content of the cured tobacco is significantly reduced compared to tobacco cured with heated air containing nitric oxide gases from the burning of a propane or diesel fuel;

correlating the determination with the preparation of cured tobacco that is not contacted by the exhaust gases produced during curing; and

incorporating the cured tobacco into a tobacco product; wherein the TSNA content of the tobacco in the tobacco product is significantly reduced compared to tobacco cured with heated air containing nitric oxide gases from the burning of a propane or diesel fuel.

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21. In a method for preparing cured Virginia tobacco comprising the steps of:

providing a barn having an air circulation device and a heat exchange unit;
putting harvested green Virginia tobacco in the barn;
producing heated air and exhaust gases through the act of burning a propane or diesel fuel in the heat exchange unit;

preventing substantially all of the exhaust gases, produced through the act of burning a propane or diesel fuel in the heat exchange unit, from contacting the harvested tobacco and from causing a chemical reaction therewith; and

circulating the heated air, with the aid of the air circulation device, produced through the act of burning a propane or diesel fuel, in the heat exchange unit, through the barn for at least about 120 hours in the absence of substantially all of the exhaust gases to produce cured tobacco while substantially preventing formation of TSNA in the cured tobacco that would otherwise be formed as a result of the chemical reaction;

wherein the improvement comprises:

making a determination that the TSNA content of the cured tobacco is significantly reduced compared to tobacco cured with heated air containing nitric oxide gases from the burning of a propane or diesel fuel; and

correlating the determination with the preparation of cured tobacco that is not contacted by the exhaust gases produced during curing.

22. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the temperature of the heated air is about 35°C to about 75°C.

23. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the heated air is circulated for less than about 200 hours.

24. The method of claim 14, 15, 16, 17, 18, 20 or 21, wherein the step of circulating heated air comprises a yellowing treatment step, a leaf drying treatment step, and a midrib drying treatment.

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25. The method of claim 24, wherein the yellowing treatment step comprises circulating air heated to about 35°C to about 40°C for about 24 to about 72 hours.
26. The method of claim 24, wherein the yellowing treatment step comprises circulating air heated to about 35°C to about 40°C for about 36 to about 60 hours.
27. The method of claim 24, wherein during the yellowing treatment step, ambient air is introduced into the barn.
28. The method of claim 24, wherein the leaf drying treatment step comprises circulating air heated to about 40°C to about 57°C for about 48 hours.
29. The method of claim 24, wherein during the leaf drying treatment step, ambient air is introduced into the barn.
30. The method of claim 29, wherein the amount of ambient air introduced into the barn during the leaf drying stage is greater than the amount of ambient air introduced into the barn during the yellowing stage.
31. The method of claim 24, wherein the midrib drying treatment step comprises circulating air heated to about 57°C to about 75°C for about 48 hours.
32. The method of claim 24, wherein during the midrib drying treatment step, heated air is recirculated within the barn.
33. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the step of circulating heated air is performed for about 5 days to about 8 days.

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34. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the step of circulating heated air is performed for about 6 days to about 7 days.

35. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the temperature of the heated air does not exceed about 90°C.

36. The method of claim 35, wherein the temperature of the heated air does not exceed about 85°C.

37. The method of claim 35, wherein the temperature of the heated air does not exceed about 80°C.

38. The method of claim 24, wherein the relative humidity in the barn is about 85 percent during the yellowing treatment step.

39. The method of claim 24, wherein the relative humidity in the barn is lower during leaf drying and midrib drying treatment steps compared to the yellowing treatment step.

40. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the level of nitric oxide gases present in the barn does not exceed that normally present in non-polluted, ambient, environmental air.

41. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the level of nitric oxide gases present in the barn is less than 0.1 kilogram of nitric oxide.

42. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the level of nitric oxide gases present in the barn is less than 0.01 kilogram of nitric oxide.

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43. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the level of nitric oxide gases present in the barn is about equal to the amount in ambient, environmental air.

44. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the level of nitric oxide gases present in the barn is less than the amount in ambient, environmental air.

45. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the barn is further equipped with a means for removing nitric oxide gases from the atmosphere within the barn.

46. The method of claim 45, wherein the means is selected from the group consisting of a catalytic conversion unit, scrubber, absorbent material, and selective filtration material.

47. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the cured tobacco comprises sugar contents of about 12 to about 20 percent, based on the dry weight of the cured tobacco.

48. The method of claim 19, 20 and 21, wherein the TSNA content is less than 2 ppm, based on the dry weight of the cured tobacco.

49. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the TSNA content is less than 1.5 ppm, based on the dry weight of the cured tobacco.

50. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the TSNA content is less than 1 ppm, based on the dry weight of the cured tobacco.

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51. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the TSNA content is less than 0.5 ppm, based on the dry weight of the cured tobacco.
52. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the TSNA content is undetectable.
53. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the harvested green Virginia tobacco is not pretreated.
54. The method of claim 14, 15, 16, 17, 18, 19, 20 or 21, wherein the barn is a bulk barn.
55. The method of claim 20, wherein the TSNA content of the tobacco in the tobacco product is 5 times lower than tobacco cured with heated air containing nitric oxide gases produced from the burning of a propane or diesel fuel.
56. The method of claim 20, wherein the TSNA content of the tobacco in the tobacco product is 7 times lower than tobacco cured with heated air containing nitric oxide gases produced from the burning of a propane or diesel fuel.
57. The method of claim 20, wherein the TSNA content of the tobacco in the tobacco product is 10 times lower than tobacco cured with heated air containing nitric oxide gases produced from the burning of a propane or diesel fuel.

Remarks

Applicant respectfully requests that claims 14-57 be entered and made of record. Support for these claims can be found throughout the specification. In view of ongoing prosecution, the Examiner is asked to consider these claims after their entering and in view of the Response to the Office Action of February 22, 2002 which will be filed at a later date.